# Research Internship at The Biometry Hub

The Biometry Hub and SAGI-STH [Statistics for Australian Grains Industry in the Southern Region] have initiated and implemented a problem-based internship program for researchers in agriculture and biological sciences. The program is designed for researchers interested in increasing their knowledge and skills in design and analysis of complex experiments, statistical modelling and advanced and high performance computing while working on their research projects.

The acceptance to the program is conditional on matching the goals of researchers expressed in their application with the expertise available in the Biometry Hub. The placements are limited to two at a time. The researchers are invited to be located at the Biometry Hub for a large part of their program.

**Fields of internship:** Advanced linear mixed models in comparative experiments and plant and animal breeding. Statistical genetics in applications to plant and animal genetics. Field sampling. Plant bioinformatics. Computational methods for big data and HPC. R programming and development of Shiny apps.

**Internship fields of priority:** In 2018-2019, the preference will be given to applicants in statistical genetics and field sampling to match the capability developments in the Biometry Hub.

**Application to the Biometry Hub internship program:** A formal application is expected from a researcher interested in undertaking the internship. This application must clearly explains how the skills targeted will benefit the relevant GRDC research program and increase the research productivity of the applicant. The application must be discussed with and endorsed by the management of the applicant.

**Professional development goal:** To enable researchers to develop conceptual statistical or data analytics understanding and computational skills in designing and analysing research trials typical for their projects or representative of research practice in their field.

**Prerequisite:** It is expected that the applicant is well familiar with the basics statistics and data analytics in the corresponding field of internship. For example, those wanting to pursue advance linear mixed models must have completed SAGI-STH training courses or equivalent. A certificate of participation and reference on achievements is issued upon the completion of the program.

For further information contact:
biometrytraining@adelaide.edu.au

Or to check the training schedule visit:
http://bit.do/biometryhub

**Internship schedule:** The schedule is developed for each case individually. It is expected that the initial phase is conducted intensively, requiring the presence of the researcher in the Biometry Hub for several days a week over several weeks. After that, the regular contacts can be scheduled to a one-day a week presence in the Hub or online. For the duration of the internship, the researcher becomes a research visitor of the Biometry Hub and is assigned a supervisor/mentor from the staff of the Biometry Hub.

**Research presentation:** At the end of the program, an internship researcher produces a full-scale report on design and analysis of research trials acceptable under the standards of reproducible research. It is expected that the researcher presents an intermediate and exit seminars explaining the statistical or data analytics methodologies learned in the internship program.

**IP and authorship issues:** While it is understood that the internship participants are working on their original research, it is expected that the impact of the internship program is properly acknowledged in official reports, presentations and research publications. When appropriate, the authorship must be openly discussed with the staff of the Biometry Hub following the standard rules for authorship, see for example,

**Travel and living away from home subsistence:** It is assumed that the travel expenses are looked after by the applicants. The Biometry Hub does not provide any financial support.



**SAGI-STH**
Statistics for the Australian Grains Industry
Southern Region